



LTE Radios

LTE (4G) and 3G



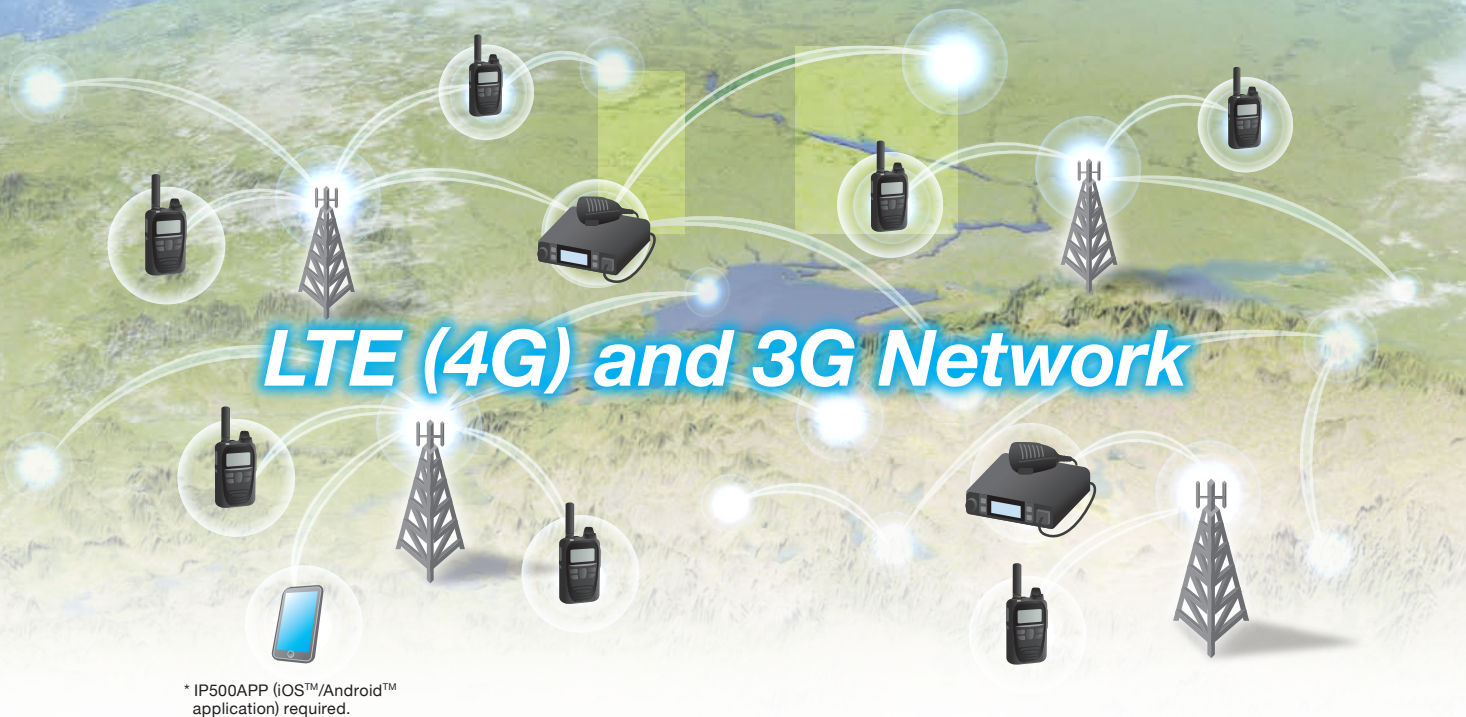
IP ADVANCED RADIO SYSTEM



Instant Wide Area Coverage Over an LTE (4G) and 3G Network

LTE radio provides instantaneous, wide area communication using an LTE (4G) and 3G network*. LTE radio doesn't require its own repeaters or IP network, therefore reducing the cost of building, and maintaining a wide area radio network.

* Service availability depends on the country. Network coverage provided by a custom SIM card.



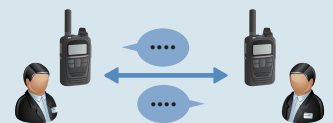
One-to-Many Communication

Unlike mobile phones, the IP503H/IP501M users can immediately start talking to all the radios in the same talkgroup, with just a push of the transmit (PTT) button.



Full-Duplex Communication

Our LTE Radios use full-duplex conversation, which allows users to talk and receive at the same time. This allows smooth, telephone like conversations.



Priority Interrupt Calling

The LTE radios provide group calling with three or more people. In case of an emergency, you can break into an on-going call to transmit an important message.



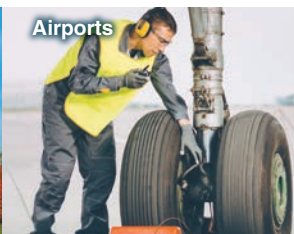
Multiple User Communication

Multiple users in the call groups can initiate calls in a instant, removing the need to wait for available channels to communicate.

Buses



Airports



Railways



Transportation



Utilities



Compact and Durable LTE Handheld



LTE RADIO

IP503H

**900 mW powerful,
high quality audio with wideband,
near lossless G.726 vocoder**

**IP67 waterproof and dust-tight
(1 m depth water for 30 minutes)**

**Emergency Call, Lone Worker and
Man Down functions**

Voice Record/Playback functions

**Vibration Alert function notifies of
incoming calls**

Built-in Bluetooth® and GPS

And More

- Optional BC-218 charger cradle and HM-215 speaker-microphone, the Bluetooth® function enables you to wirelessly use the speaker-microphone connected to the charger
- Text message reception and preprogrammed message transmission
- Up to 500 memory address book (including Group, Individual, Talk Group and telephone*)
- Full duplex communication
- Full dot-matrix display

* VE-PG4 required.

Supplied accessories

- BP-272 Li-ion battery pack
- MB-135 belt clip
- Hand strap
- Antenna

Slim and Feature Packed LTE Mobile



LTE RADIO

IP501M

Built-in Bluetooth® and GPS

**Ethernet port for data
communication***

* The optional VE-PG4 is required.



Supplied GPS antenna

**Text message reception and
preprogrammed message transmission**

**Emergency call and
Lone Worker functions**

Noise Cancelling function (TX only)

And More

- Meets IP54 and MIL-STD-810G standards
- D-SUB 25-PIN connector with optional OPC-2407 cable for interfacing with other devices, various controls and data communication
- Up to 500 memory address book (including Group, Individual, Talk Group and telephone*)
- Full duplex communication
- Full dot-matrix display
- Both 12 and 24 volt compatible

* VE-PG4 required.

Supplied accessories

- HM-241 speaker-microphone
- LTE antenna (2 pcs)
- GPS antenna
- DC power cable
- Mounting bracket kit
- Microphone hanger

Just Put the IP503H in the Slot and Start a Conference Call



SPEAKERPHONE UNIT

VE-SP1

- Portable operation with LR6 (AA) × 8 cells
- Built-in loudspeaker and high sensitivity external microphone
- Charges the radio when using the AC adapter

Supplied accessories

- OPC-2397 connection cable
- BC-242 AC adapter
- SM-1 external microphone

* The LTE radio is not supplied.

OPTIONS (For Handheld Radio)

MULTI-CHARGER  BC-211^{*1}  BC-157S	CHARGER CRADLE  BC-218 +MBA-7+MBF-1 With Bluetooth® function  HM-215 Speaker-microphone	SPEAKER-MICROPHONES  HM-183LS IPX7 waterproof  HM-186LS	BATTERY PACKS  BP-271 Li-ion 1150/1200 mAh (min./typ.), IP67  BP-272 Li-ion 1880/2000 mAh (min./typ.), IP67		
EARPHONE-MICROPHONES  HM-153LS  HM-166LS	HEADSET  HS-102 Earphone type headset	Bluetooth® HEADSET  VS-3	CARRYING CASES  LC-185 For use with BP-272  LC-183 For use with BP-271	RAPID CHARGER  BC-202IP2^{*1} The radio can be used while charging	SHOULDER STRAP  MB-57L For use with LC-183/LC-185
• AC ADAPTERS BC-123S^{*2} For use with the BC-202IP2 BC-207S For use with the BC-218	• CIGARETTE LIGHTER CABLES (for use with BC-218) CP-22 With DC-DC converter, 12-24 V DC CP-23L 12 V DC		• PTT SWITCHCABLE OPC-2359 Required when using the HS-102	• PROGRAMMING SOFTWARE and CABLE CS-IP501H Programming software OPC-478UC Programming cable	

• AC ADAPTERS

- BC-123S^{*2} For use with the BC-202IP2
- BC-207S For use with the BC-218

• CIGARETTE LIGHTER CABLES (for use with BC-218)

- CP-22 With DC-DC converter, 12-24 V DC
- CP-23L 12 V DC

• PTT SWITCHCABLE

- OPC-2359 Required when using the HS-102

• PROGRAMMING SOFTWARE and CABLE

- CS-IP501H Programming software
- OPC-478UC Programming cable

*1 AC adapter may be supplied as standard, depending on the version.

*2 BC-123SA for USA plug, SE for Europe plug, SV for Australia plug.

A Handheld-Like User Interface with Optional HM-230HB Command Microphone



COMMANDMIC™

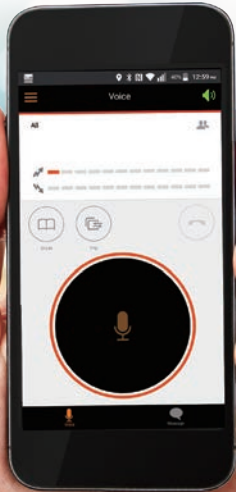
HM-230HB

- Saves space and fully controls the IP501M
- Direct message and calling ID input
- Four function assignable buttons (Emergency/P1/P2/P3)

OPTIONS (For Mobile Radio)

COMMANDMIC™ HM-230HB IP55	SPEAKER-MICROPHONE HM-241 IP54 (same as supplied)	DESKTOP MICROPHONE SM-28	Bluetooth® HEADSET VS-3	EXTERNAL SPEAKERS SP-30 20 W, 4 Ω (2.6 m, 8.5 ft) SP-35 5 W, 4 Ω (2 m, 6.6 ft)
ACC CABLE OPC-2407 With D-SUB 25-pin	EXTENSION CABLE OPC-2355 For a microphone (2.5 m, 8.2 ft)	USB PROGRAMMING CABLE OPC-1122U	• PROGRAMMING SOFTWARE CS-IP501M Programming software	

iOS™/Android™ Application to Communicate with LTE Radios



Voice communication screen



Short text message screen

iOS™/Android™ APPLICATION

IP500APP

Use your smartphone*¹ to talk and listen to the LTE radios. The IP500APP application*² lets you join the radio fleet as if you are using the real radio.

Main features

- Full-Duplex communication
- Short text message
- Voice Recording/Playback function
- Address book
- TX/RX history

*¹ IP500APP for iOS™: iOS™ version 12 or later

IP500APP for Android™: Android™ version 8.0 or later

*² IP500APP service may not be available and will be ready in the future.

Radio Gateway — Link LTE Radios to Private Mobile Radios, WLAN Radios, IP Phone Systems and More

The VE-PG4 is a versatile RoIP (Radio over IP network) gateway unit, which seamlessly interconnects LTE radios, private mobile radios, WLAN radios, IP phone systems, SATELLITE PTT radios and external devices. The built-in LTE module* provides virtually nationwide communication coverage.

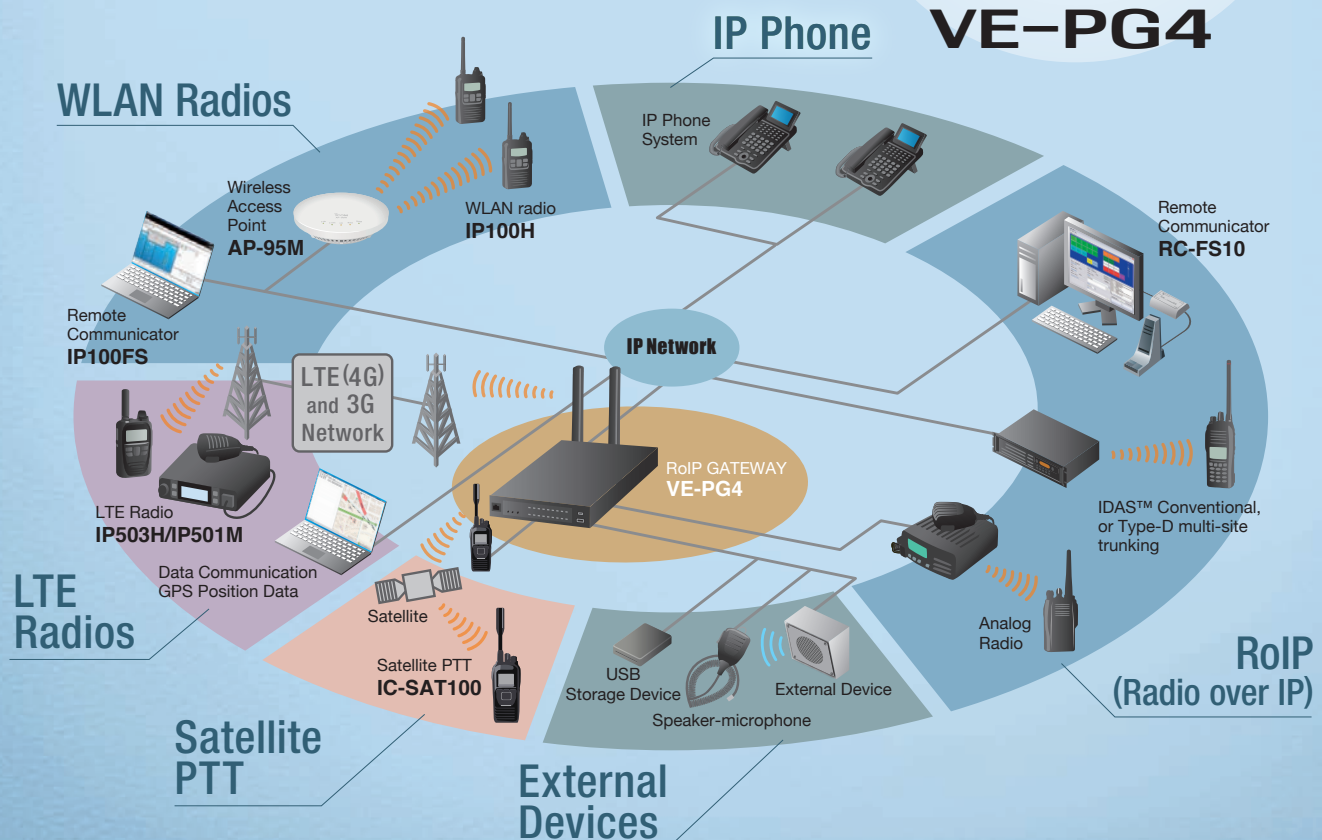
* Service availability depends on the country. Network coverage provided by a custom SIM card.



RoIP GATEWAY

VE-PG4

Communication Links

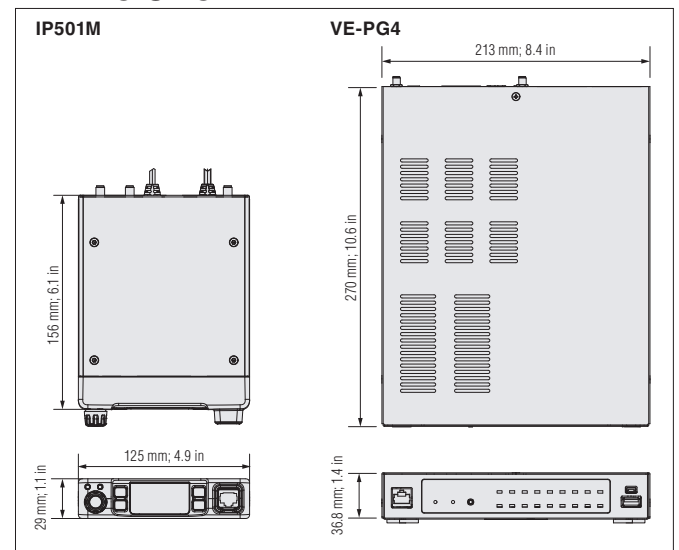


SPECIFICATIONS

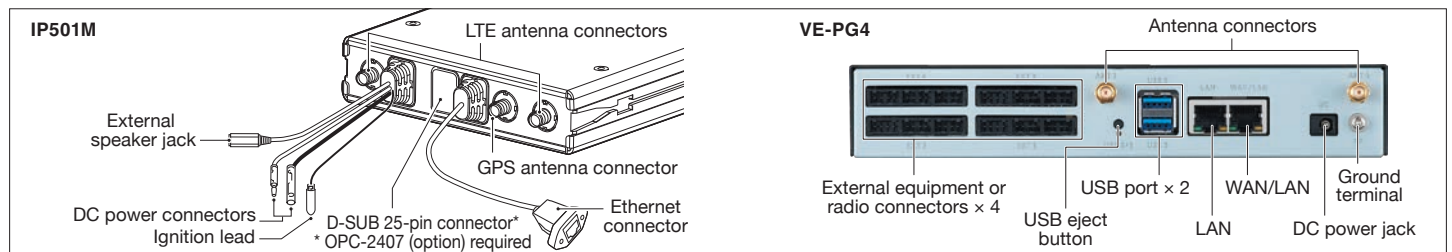
		IP503H (Handheld radio)	IP501M (Mobile radio)
Network	USA	–	LTE (4G) bands: B2, B4, B12 W-CDMA (3G) bands: B2, B5
	EXP	LTE (4G) bands: B1, B3, B7, B8, B20 W-CDMA (3G) bands: B1, B8	LTE (4G) bands: B1, B3, B7, B8, B20 W-CDMA (3G) bands: B1, B8
	AUS	LTE (4G) bands: B1, B3, B5, B7, B8, B28 W-CDMA (3G) bands: B1, B5	LTE (4G) bands: B1, B3, B5, B7, B8, B28 W-CDMA (3G) bands: B1, B5
Dimensions (W × H × D; projections not included)		59 × 95 × 32 mm; 2.3 × 3.7 × 1.3 in (Approximate, with BP-272)	125 × 29 × 156 mm; 4.9 × 1.1 × 6.1 in (Approximate)
Weight (approximate)		240 g; 8.5 oz (with BP-272 and antenna)	840 g, 1.9 lb (Main unit)
Voice Codec		G.726 (32 kbps)	G.726 (32 kbps)
AF output power	Internal SP	More than 900 mW (8 Ω at 10% distortion)	–
	External SP	More than 200 mW (8 Ω at 10% distortion)	More than 4 W (4 Ω at 10% distortion)
Operating time		17 hours (with BP-272) (TX : RX : Standby= 5 : 5 : 90)	–
Bluetooth®		Ver 2.1 +EDR	Ver 2.1 +EDR
GPS		Built-in	Built-in (External GPS antenna supplied)
LAN		–	RJ-45 type × 1 (AUTO MDI/MDI-X) 100BASE-TX/10BASE-T

		VE-PG4
Network	USA	LTE (4G) bands: B2, B4, B12 W-CDMA (3G) bands: B2, B5
	EXP	LTE (4G) bands: B1, B3, B7, B8, B20 W-CDMA (3G) bands: B1, B8
	AUS	LTE (4G) bands: B1, B3, B5, B7, B8, B28 W-CDMA (3G) bands: B1, B5
Power supply		12 V DC ±10%, 4 A maximum 100–240 V AC (with the supplied AC adapter)
Dimensions (W × H × D; projections not included)		213 × 36.8 × 270 mm, 8.4 × 1.4 × 10.6 in (Approximate)
Weight		1.8 kg, 4 lb (Main unit, approximate)
WAN/LAN		RJ-45 type × 1 (Auto MDI/MDI-X) 10BASE-T/100BASE-TX/1000BASE-T *WAN/LAN port selectable.
LAN		RJ-45 type × 1 (Auto MDI/MDI-X) 10BASE-T/100BASE-TX/1000BASE-T
Internet protocol		IPv4
Call Control Protocol		SIP
Codec		G.711 μ-law, AMBE+2™
Compatible models	LTE Radios	IP501H, IP503H, IP501M
	WLAN Radio	IP100H
	Satellite PTT	IC-SAT100
	VHF/UHF Repeaters	IC-FR5000, IC-FR5100, IC-FR6000, IC-FR6100
	VHF/UHF Radios	IC-F5061D, IC-F5062D, IC-F5063D, IC-F6061D, IC-F6062D, IC-F6063D
	VHF Marine Radios	IC-M605, IC-M605EURO
	VHF Air Band Radios	IC-A120, IC-A120E

DIMENSIONS



REAR PANEL VIEW



CASE STUDIES

Japan Airlines
Simultaneous communication system leads to quick and high quality service at low cost.

Osaka Metro
Osaka Metro has introduced the Icom LTE radios in all 133 stations.

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